I. AMENDMENT

In the Claims:

1. - 104. (Cancelled)

105. (Currently Amended) A method for preparing a DNA molecule comprising the steps of:

a) obtaining a sample of DNA wherein the sample includes DNA fragments that do not include a 3' hydroxyl group;

b) conditioning DNA fragments of the sample to provide a 3' hydroxyl group thereon; and

c) attaching ~~an~~ a double stranded oligonucleotide adaptor to only one strand of the conditioned DNA fragment.

106. (Previously Presented) The method of claim 105, wherein DNA molecules of the DNA sample have been fragmented.

107. (Withdrawn) The method of claim 106, wherein the DNA molecules have been fragmented by physical means.

108. (Withdrawn) The method of claim 107, wherein the DNA molecules have been fragmented by sonication.

109. (Withdrawn) The method of claim 107, wherein the DNA molecules have been fragmented by nebulization.

110. (Withdrawn) The method of claim 107, wherein the DNA molecules have been fragmented by hydrodynamic shear.

111. (Withdrawn) The method of claim 107, wherein the DNA molecules have been fragmented by freezing and thawing.

112. (Previously Presented) The method of claim 106, wherein the DNA molecules have been fragmented by chemical means.

113. (Currently Amended) The method of claim 112~~107~~, wherein the DNA molecules have been fragmented through a reaction that includes hydroxyl radicals.

114. (Previously Presented) The method of claim 113, wherein the DNA molecules have been fragmented through treatment with a Fenton reagent.

115. (Previously Presented) The method of claim 114, wherein the Fenton reagent comprises a metal ion chelating agent and a divalent metal ion.

116. (Withdrawn) The method of claim 106, wherein the DNA molecules have been fragmented by enzymatic means.

117. (Withdrawn) The method of claim 116, wherein the DNA molecules have been fragmented using an endonuclease.

118. (Withdrawn) The method of claim 116, wherein the DNA molecules have been fragmented through the use of a restriction endonuclease.

119. (Withdrawn) The method of claim 118, wherein the DNA molecules have been fragmented through the use of a restriction endonuclease having a two base recognition sequence.

120. (Withdrawn) The method of claim 118, wherein the DNA molecules have been fragmented through the use of a restriction endonuclease having a four base recognition sequence.

121. (Withdrawn) The method of claim 118, wherein the restriction endonuclease has introduced random double strand breaks into DNA molecules.

122. (Withdrawn) The method of claim 117, wherein the endonuclease introduced a blunt end.

123. (Previously Presented) The method of claim 105, wherein DNA fragments that lack a 3' hydroxyl are conditioned through the use of a 3' exonuclease.

124. (Previously Presented) The method of claim 123, wherein the 3' exonuclease is exonuclease III.

125. (Previously Presented) The method of claim 105, wherein the DNA fragments that lack a 3' hydroxyl are conditioned through the use of a DNA polymerase that possesses 3' to 5' exonuclease activity.

126. (Cancelled)

127. (Cancelled)

128. (Cancelled)

129. (Currently Amended) The method of claim 105~~127~~, wherein the double stranded adaptor is attached to the conditioned DNA by means of a 5' terminus of the adaptor.

130. (Previously Presented) The method of claim 129, wherein the double-stranded oligonucleotide adaptor is blocked at at least one of its 3' termini.

131. (Previously Presented) The method of claim 130, wherein the double-stranded oligonucleotide adaptor is blocked at both of its 3' termini.

132. (Previously Presented) The method of claim 105, wherein the conditioned DNA fragments are amplified.

133. (Previously Presented) The method of claim 132, wherein DNA fragments are amplified through a PCR reaction.

134. (Previously Presented) The method of claim 133, wherein the DNA fragments are amplified through a PCR reaction through the use of double-stranded adaptors that have been attached to the conditioned DNA fragments.

135. (Previously Presented) The method of claim 105, further defined as comprising the steps of:

a) obtaining a sample of DNA wherein the sample includes DNA fragments that do not include a 3' hydroxyl group, wherein the sample has been subjected to fragmentation;

b) conditioning DNA fragments of the sample that lack a 3' hydroxyl by incorporating a 3' hydroxyl group thereon;

c) attaching adaptors to DNA fragments of the sample; and

d) amplifying DNA fragments of the sample through the use of the adaptors.

136. (Previously Presented) A method for preparing a DNA molecule comprising the steps of:

a) obtaining a sample of DNA wherein the sample includes DNA fragments that do not include a 3' hydroxyl group, wherein the DNA molecules have been fragmented by chemical means; and

b) conditioning DNA fragments of the sample to provide a 3' hydroxyl group thereon.

137. (Previously Presented) The method of claim 136, wherein the DNA molecules have been fragmented through a reaction that includes hydroxyl radicals.

138. (Previously Presented) The method of claim 137, wherein the DNA molecules have been fragmented through treatment with a Fenton reagent.

139. (Previously Presented) The method of claim 138, wherein the Fenton reagent comprises a metal ion chelating agent and a divalent metal ion.

140. (Previously Presented) The method of claim 136, wherein DNA fragments that lack a 3' hydroxyl are conditioned through the use of a 3' exonuclease.

141. (Previously Presented) The method of claim 140, wherein the 3' exonuclease is exonuclease III.

142. (Previously Presented) The method of claim 136, wherein the DNA fragments that lack a 3' hydroxyl are conditioned through the use of a DNA polymerase that possesses 3' to 5' exonuclease activity.

143. (Previously Presented) The method of claim 136, further comprising attaching an oligonucleotide adaptor to the conditioned DNA fragments.

144. (Previously Presented) The method of claim 143, wherein the oligonucleotide adaptor is a double-stranded oligonucleotide adaptor.

145. (Previously Presented) The method of claim 144, wherein the double-stranded oligonucleotide adaptor is attached to the conditioned DNA by only one of its two strands.

146. (Previously Presented) The method of claim 145, wherein the double stranded adaptor is attached to the conditioned DNA by means of a 5' terminus of the adaptor.

147. (Previously Presented) The method of claim 146, wherein the double-stranded oligonucleotide adaptor is blocked at at least one of its 3' termini.

148. (Previously Presented) The method of claim 147, wherein the double-stranded oligonucleotide adaptor is blocked at both of its 3' termini.

149. (Previously Presented) The method of claim 136, wherein the conditioned DNA fragments are amplified.

150. (Previously Presented) The method of claim 149, wherein DNA fragments are amplified through a PCR reaction.

151. (Previously Presented) The method of claim 150, wherein the DNA fragments are amplified through a PCR reaction through the use of double-stranded adaptors that have been attached to the conditioned DNA fragments.

152. (Previously Presented) The method of claim 136, further defined as comprising the steps of:

a) obtaining a sample of DNA wherein the sample includes DNA fragments that do not include a 3' hydroxyl group, wherein the sample has been subjected to fragmentation;

b) conditioning DNA fragments of the sample that lack a 3' hydroxyl by incorporating a 3' hydroxyl group thereon;

c) attaching adaptors to DNA fragments of the sample; and

d) amplifying DNA fragments of the sample through the use of the adaptors.